

## **Patent Abstracts of Japan**

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APPLICANT: TOYOTA MOTOR CORP;

INVENTOR:

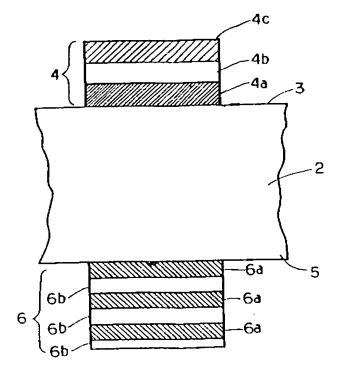
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INT.CL.

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TITLE

MOON ROOF FOR AUTOMOBILE



ABSTRACT :

PURPOSE: To keep the passenger compartment cool as well as to prevent a glare by providing an optical film onto the glass panel that reflects the infrared rays.

CONSTITUTION: The glass panel 2 of a moon roof 1 has on its exterior surface 3 an optical film 4 that presents no or little reflection to visible rays, and has on its interior surface 5 a thermic ray reflecting film 6. The film 4 has three layers of optical films, respectively consisting of an optical film 4a of cerium fluoride which is a matter having a low refractive index, an optical film 4b of zirconium oxide which is a matter having a high refractive index, and an optical film 4c of magnesium fluoride which is a matter having a low refractive index in the order from the top of the glass panel 2 to the exterior side. On the other hand, the thermic ray reflecting film 6 has six layers of optical films, in which titanium oxide film 6a having a high refractive index and silicon dioxide film having a low refractive index are alternatingly placed.

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